REMARKS

Claims 21, 25 and 26 are pending (claims 22-24 being canceled and claims 25 and 26 being added by this amendment).

In the aforesaid Office Action, the Examiner rejected claims 21-24 under 35 U.S.C. § 103(a) as being unpatentable over Adams (6,221,042) in view of Nordqvist et al. (4,575,371), stating that Adams shows a balloon having proximal and distal end portions which extend inwardly with respect to the working section, but does not disclose proximal and distal secured sections that are secured to the catheter shaft and located at positions on the shaft which are between the proximal end and the distal end of the central working section of the balloon in the inflated configuration, and, however, such configurations (balloons with secured sections between the proximal and distal end of the central working section of the balloon in the inflated configuration) are conventional in the art as evidenced by Nordqvist et al.

The Examiner states that in Fig. 5, Nordqvist et al. shows a balloon having secured sections between the proximal and distal end of the central working section of the balloon in the inflated configuration.

Applicants have amended claim 21 to clarify that the working section of the balloon is the section which has a cylindrical inflated outer diameter defining the maximum inflated diameter of the balloon from the proximal to the distal end of the working section. In contrast, it is not clear from Fig. 5 of Nordqvist that the secured sections of the balloon are in fact between the ends of the working section (i.e., between the section which defines the maximum inflated diameter of the balloon from the proximal to the distal end of the working section). Rather, the balloon chambers each have an outer surface which tapers outwardly away from the central working section before tapering back inwardly toward the working length section, so that sections of the balloon appear to contact the shaft beyond ends of the working section (i.e., beyond the length of the balloon which defines the maximum inflated outer diameter of the balloon).

Moreover, even if Nordqvist et al. does teach a balloon having secured sections between the proximal and distal end of the central working section of the balloon, the

Fig. 5 embodiment of Nordqvist et al. comprises two chambers 3′ and 3″ arranged on opposite sides of the catheter tube. In Nordqvist Fig. 5, the chambers 3′ and 3″ appear to be formed by two separate balloons, each balloon being secured to the shaft around an opening providing access into the balloon interior. Therefore, contrary to the Examiner's assertion, Nordqvist et al. does not indicate that a catheter having a balloon with secured sections between the proximal and distal end of the central working section of the balloon in the inflated configuration is conventional in the art, because the configuration in Fig. 5 of Nordqvist et al. is the result of having two separate balloons each of which must have an opening joined to opposite sides of the shaft. It would therefore not have been obvious to one of ordinary skill in the art from Nordqvist et al. Fig. 5 to modify the single balloon of Adams et al. to have secured sections between the proximal and distal end of the central working section of the balloon in the inflated configuration.

Additionally, Nordqvist et al. does not disclose or suggest a balloon having a single interior chamber which encircles the catheter shaft, as required by Applicant's claim 21.

Support for the amendment to claim 21, clarifying that the balloon has a single interior chamber which encircles the catheter shaft, can be found in Figs. 1 and 4. Additionally, Applicants have amended claim 21 to clarify that the inwardly tapering sections of the balloon are radially aligned with end portions of the working section of the balloon, so that the working section (i.e., the length of the balloon which defines the maximum inflated outer diameter of the balloon) has a middle portion which exerts a purely outward radial force, and end portions which exert in part an inward radial force. Support can be found in the third and fourth paragraphs of the Summary section. In contrast, the working section (i.e., length of the balloon which defines the maximum inflated outer diameter of the balloon) of Nordqvist et al. Fig. 5 does not appear to have end portions which exert in part an inward radial force. Rather, in Nordqvist et al. Fig. 5, the portions of the balloon which taper inwardly are radially aligned with end sections of the balloon which taper outwardly away from the central working section of the balloon.

Modifying Adams in view of Nordqvist et al., to replace the balloon of Adams with the two chambered embodiment of Nordqvist Fig. 5, appears to be at least somewhat acceptable to the purpose of Adams, which requires that in the deflated state the balloon has pleated/folded ends which create bulk to thereby increase the deflated balloon outer diameter under the stent. However, as discussed above, the two chambered embodiment of Nordqvist Fig. 5 does not result in Applicants desired balloon having a central working section with end portions exerting a radial force which is in part directed inwardly in the inflated configuration.

Although Adams does disclose a balloon with a single chamber encircling the shaft, Applicant's claim 21 requires that both the proximal and distal secured sections of the balloon are between the proximal end and the distal end of the central working section of the balloon in the inflated configuration. In contrast, Nordqvist et al. requires that the balloon chambers in expanded condition project in front of the distal tip of the shaft. Modifying Adams in view of Nordqvist et al. as set forth by the Examiner therefore only teaches moving the distal secured section to a location between the ends of the central working section of the balloon so that the balloon in the expanded condition projects in front of the distal tip.

In order to modify the balloon of Adams to move the proximal secured section of the balloon to a location between the ends of the central working section of the balloon, the outer member of the shaft 12 must first be modified to move its distal end to a more distal location to provide a surface for sealing to the balloon. However, this is contrary to the teaching of Adams which specifically requires that the balloon catheter design eliminates the need for mounting bodies 50 which increase the outer diameter of the shaft within the balloon interior. Additionally, although the balloon of Adams is capable of being modified to move the proximal secured section to a location between the ends of the central working section of the balloon if the outer member of the shaft 12 is extended distally to provide a surface for sealing to the balloon, there is no motivation provided to do so. Rather, Nordqvist et al. only teaches that the distal end of the balloon in the inflated condition must extend distally of the distal end of the shaft to protect the body

tissues. The location of the proximal secured section(s) in Nordqvist et al. Fig. 5 is a by-product of the two chambered design of Fig. 5, and as discussed above, replacing the balloon of Adams with the two chambered design of Nordqvist Fig. 5 does not result in the embodiment of Applicant's balloon set forth in the claim 21.

In view of the foregoing, it is respectively urged that all of the present claims of the application are patentable and in a condition for allowance. The undersigned attorney can be reached at (310) 824-5555 to facilitate prosecution of this application, if necessary.

In light of the above amendments and remarks, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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